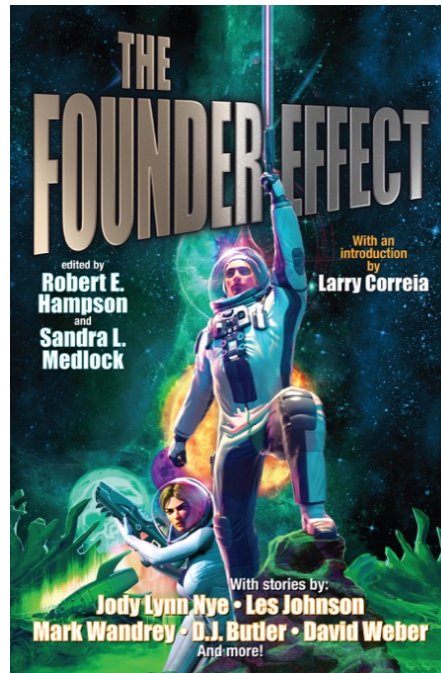


Baen Books Teacher Guide: The Founder Effect



Contents:

- recommended reading levels
- initial information about the anthology
- short stories grouped by themes
- guides to each short story including the following:
 - author's biography as taken from the book itself
 - selected vocabulary words
 - content warnings (if any)
 - short summary
 - selected short assessment questions
 - suggested discussion questions and activities

Recommended reading level: *The Founder Effect* is most appropriate for an adult audience; classroom use is recommended at a level no lower than late high school.

Background: Published in 2020 by Baen Books, *The Founder Effect* tackles the lens of history on its subjects—both in their own words and in those of history. Each story in the anthology tells a different part of the same world's history, from the colonization project to its settlement to its tragic losses. The prologue provides a key to the whole book, serving as an introduction to the fictitious encyclopedia and textbook entries which accompany each short story.

Editors' biographies:

Robert E. Hampson, Ph.D., turns science fiction into science in his day job, and puts the science into science fiction in his spare time. Dr. Hampson is a Professor of Physiology / Pharmacology and Neurology with over thirty-five years' experience in animal neuroscience and human neurology. His professional work includes more than one hundred peer-reviewed research articles ranging from

the pharmacology of memory to the first report of a “neural prosthetic” to restore human memory using the brain’s own neural codes.

He consults with authors to put the “hard” science in “Hard SF” and has written both fiction and nonfiction for Baen Books. His own hard-SF and mil-SF have been published by the US Army Small Wars Journal, Springer, Seventh Seal Press, and Baen. He is a member of SIGMA think tank and the Science and Entertainment Exchange—a service of the National Academy of Sciences. Find out more at his website: REHampson.com.

Sandra L. Medlock started her career as an editor and writer by reviewing environmental impact studies for the U.S. Air Force. She transitioned to editing for a private publisher and over time worked in the legal department for an oil company reviewing briefs and filings. Sandra moved to corporate writing and editing procedural and policy manuals. Her interest in computers and software led to a shift in her career as director and corporate trainer for two independent training companies and the IT department of a global manufacturer, where she wrote training curricula as well as company newsletters.

As a freelance journalist, Sandra wrote a weekly music column, a weekly technology column, and a monthly lifestyles column for three regional newspapers, including the *San Antonio Express-News*. She wrote freelance computer technology magazine articles, created and edited newsletters for several organizations, and was the producer of two computer shows on local radio.

Currently, Sandra tutors students in math and English, provides an editing service, teaches music, and writes fiction. She lives outside San Antonio, Texas with her husband, two very demanding small dogs, and a senior cat who has perfected Chewbacca’s wail. You can find her on social media and blogging at sandramedlock.com.

Introductory information: Foreword

Questions:

- What are some legends you grew up with?
- Who or what do you think will be a legend in the future?
- How can you imagine history reporting on us now?

Introductory information: Prologue

“TRAPPIST” and “Cistercia” are a bit of a joke—a nod to a certain family of Catholic monks. Cistercians are a subset of the Benedictine order (the first monastic religious order), and Trappists are a branch of Cistercians. They are all famously quiet, ascetic, and stable: they don’t leave their cloisters. The joke has additional meaning which may have been unintentional at the time of the book’s writing: members of religious orders have initialisms after their name indicating the order to which they belong as written in Latin (e.g. SJ is from *Societas Iesu* or *Jesu*—Society of Jesus, aka the Jesuits). The Trappist initialism is OCSO (*Ordis Cisterciensis Stricteris Observantiae*)—not to be confused with OCSO, the Office of the Chief of Space Operations.

Introductory information: Necessary Concepts

- Students should be familiar with the measurement of an AU.
- The prefixes cryo-, holo-, and bio- are commonly used.
- "Sol" describes the star around which the Earth orbits. The adjective for something of Earth origin is "Terran."

Anthology Structure:

Part One: *The Journey*

The chronicles of the terraforming ship *Prometheus*, the colony ship *Victoria*, and the inhabitants of both.

Part Two: *The Colonists*

The stories about the people who finally, after many setbacks, settle the planet Cistercia.

Part Three: *Paradise Lost*

The settling of Cistercia hasn't been smooth, and it gets worse.

How to Read note: Since each story has its own corresponding encyclopedia entry, the entries will be listed with the stories in the following format: Short Story / Entry Title.

Stories and Entries Grouped by Content/Theme:

Descent / Cursed Colony Kamekura / Dutchman The Loss of Beaver Flight / Beaverton Fire From Heaven / Coyote	} }	main sequence of stories uniting themes: man vs. technology failure of technology
Confession / Tarnished Heroes Stowaway / Volunteers Looneytunes / Genetic Bottleneck: The Founder Effect	} }	uniting themes: media bias narrative bias
Somnum Extererri / Ghosts No Word for Princes / Artificial Intelligence	} }	uniting themes: technological reliance man vs. self
Cerberus Project / Sheepdogs The Legend of Jimmy Vee / Apex Predator Jack Daw Days / Ranchers	} }	uniting themes: man vs. nature domestication of the wild
Alas Roanoke / Lost Colony On the Trail of the Sügenhound / Cryptids Redemption / Prion Disease	} }	uniting themes: lens of historical record mystery

Timeline

Timeline can be found on page 371 in the book and has been re-printed here for ease of reference.

- C.E. 2150 Construction begins in Mars orbit of the colony ship *Victoria* (named for the lone ship of Magellan's fleet to complete the circumnavigation of Earth) to be sent to TRAPPIST-2 system.
- 2155 Construction begins on the automated terraforming ship *Prometheus* to precede *Victoria* to TRAPPIST-2.
- 2165 *Prometheus* is completed and launched toward TRAPPIST-2. It is fully automated with the exception of one backup human to be awoken only in the event of emergency. Otherwise, he will sleep until after the ship arrives at TRAPPIST-2 and has completed initial terraforming/infrastructure building.
- 2170 *Victoria* is completed. Deaths of Colony Foundation leaders delay mission launch. *Victoria* is put to work ferrying scientists to the heliopause and establishing science base/colonies in the Kuiper belt.
- 2180 TRAPPIST-2 Colony Foundation begins recruiting colonists.
- 2185 *Victoria* departs for TRAPPIST-2 with ten thousand colonists in cryostasis, 100,000 fertilized human ova frozen, plus approximately 1,000,000 fertilized animal ova. Crew of 250 rotate through eighteen-month shifts with five to twenty-five people awake at a time.
- CE 2344 Ad Astra (AA) Year 0. *Victoria* Arrives at TRAPPIST-2.
- AA01 Twenty-five crew awakened to begin colonization plan. Terraforming ship *Prometheus* is missing.
- AA03 Remainder of 250 crew awakened to begin landing construction crews. Lander Alpha, *Whale*, is lost.
- AA05 Re-engineered landers sent to sites Alpha (northern hemisphere) and Beta (subtropical) sites on the principal continent of TRAPPIST-2c. Planet is renamed Cistercia and the continent named Molesme in honor of Robert of Molesme, founder of the Cistercian order of TRAPPIST monks.
- AA06 Site Alpha renamed New Virginia, Site Beta renamed Santa Antonia – or simply Antonia. First colonists revived from cryostasis.
- AA21 Site Omega, experimental colony started on second moon (Trudovik) of TRAPPIST-2a by colonists disaffected with Antonia and New Virginia. Biosphere is simple and requires minimal terraforming; however, the colony never grows very large since it is domed due to extreme temperature. A collectivist society and government results due to scarcity of resources. Colony is eventually named Kerenskiy by locals.

- AA25 Third and final colony on Cistercia established at Beaverton. Site Gamma plans are scrapped, and colony site Delta is selected on the shore of subcontinent-sized island Aopo. The crew names the planned colony Paradise, named for the lush equatorial islands. Lander 5, *San Salvador*, malfunctions, causing it to crash on an island in the wind-and-rain shadow of Aopo.
- AA30 Contact with New Virginia is lost. Overland expedition from Antonia finds no trace of colonists, and only abandoned colony equipment. Some population and equipment transfer from Antonia to repopulate the colony. Site is renamed Roanoke.
- AA40 Forty-five percent of Antonia and Roanoke colonists sick and dying of New Flu.
- AA42 Roanoke colony fails for a second time.
- AA50 Paradise colony struggles because of crop failure (poor soil, not enough fresh water) and there is talk of recovering supplies from Roanoke.
- AA75 By this date, every colony has experienced crises that drastically reduce population and damage infrastructure... however, each of them survives and the actions of the founders are becoming legend.
- AA212 *Encyclopedia Astra* published by Gannon University of Antonia, Cistercia.
- AA237 *Flint's People's History of Interstellar Exploitation* published by Trudovik Press, Kerenskiy, Trudovik.

Part One: The Journey

DESCENT

Mark H. Wandrey

Author's Biography:

International best-selling author of military sci-fi, space opera, and zombie apocalypse **Mark H. Wandrey** is also the only four-time DragonCon Dragon Award finalist!

His most successful works to date can be found in the Four Horsemen Universe (4HU), which he created and now shares with a slew of incredible authors, including his writing partner and publisher, Chris Kennedy. The first book in the series, *Cartwright's Cavaliers*, was his second Dragon Award Finalist in 2017. With more than 40 titles available, and more every month, if you love military science fiction, this is the series for you!

Living the full-time RV lifestyle as a modern-day nomad with his wife, Joy, and two Chihuahuas, Mark Wandrey has been writing science fiction since he was in grade school. He launched his professional career in 2004. Now, 15 years later, he has written more than 25 books and dozens of short stories.

Follow him on Facebook: facebook.com/mark.wandreyauthor.7; his website: worldmaker.us; or Patreon: patreon.com/MarkHWandrey.

Vocabulary to know:
redundancy (as a technical term)
exabyte and other prefixes to -byte
discrete
subroutine
positronic (in the science fiction sense)
plexi- (prefix)
talisman

Content warnings:
damn (and variants)
shit
bitch

Reading notes: This story is rather long. It has built in breaks both by day (bold heading) and by scene-break page décor (three diamonds).

Companion stories in this collection:

Kamekura / Dutchman; The Loss of Beaver Flight / Beaverton; Fire From Heaven / Coyote

Pre-reading Questions to Explore:

What sorts of things do we rely on computers for? Could we do those things without them?
How integral are they to our lives?

What is AI, *really*? How intelligent is this so-called artificial intelligence? (Suggested supplemental reading: *You Look Like a Thing and I Love You*, by Janelle Shane, a popular science book on what AI really is versus what we imagine it to be.)

Summary:

David Parker, a computer programmer, wakes alone on the terraforming ship *Prometheus* to find out that the ship is massively malfunctioning. He sets out to fix whatever he can to ensure that the ship arrives at its planetary destination.

Comprehension Questions and Activities:

1. What can you infer about how computers work from the clues in this story?
2. Who are Huey and Dewey?
3. What makes Dave finally give up and go back into cryostasis?
4. Speculate: do you think Dave's reprogramming worked?
5. Draw a setting map of the ship.

Answers

1. They need to be told every little thing unless you give them datasets and matching technology.
2. Huey and Dewey are the robots that David assigns to be his helper-bots.
3. He ran out of food.

CURSED COLONY

An excerpt from *Flint's Peoples' History of Interstellar Exploitation*, an in-universe history book.

Questions and Activities:

1. What does this tell us about what happened to Dave?
2. What do we think happened to the colony ship *Victoria*?
3. Assignment: write a short speculative piece about what happened to *Victoria*.
4. Revisit the story through the lens of this history book excerpt. What kinds of biases are present in this excerpt?

CONFESSION

Les Johnson

Author's Biography:

Les Johnson is a husband, father, physicist, and author. *Publisher's Weekly* noted that "The spirit of Arthur C. Clarke and his contemporaries is alive and well..." when describing his 2018 novel, *Mission to Methone*. His 2018 nonfiction book, *Graphene: The Superstrong, Superthin, and Superversatile Material That Will Revolutionize the World*, was reviewed in the journal *Nature*, excerpted in *American Scientist* and on Salon.com. His latest anthology, *Stellaris: People of the Stars*, co-edited with Robert Hampson, was released by Baen Books in 2019.

Les was technical consultant for the movies *Europa Report* and *Lost in Space* and has appeared on the Discovery Channel series *Physics of the Impossible* in the "How to Build a Starship" episode. He has also appeared in three episodes of the Science Channel series *Exodus Earth* as well as several other television documentaries. Les was the featured "interstellar explorer" in the January 2013 issue of *National Geographic Magazine* and appeared again in the March 2019 issue for his work on solar sail space propulsion.

Les won the Watkins Prize for his popular science writing and was a nominee for the 2019 Prometheus Award for his novel, *Mission to Methone*.

By day, Les serves as Solar Sail Principal Investigator of NASA's first interplanetary solar sail space mission and leads research on various other advanced space propulsion technologies at the George C. Marshall Space Flight Center in Huntsville, Alabama. During his career at NASA, he served as the manager for the Space Science Programs and Projects Office, the In-Space Propulsion Technology Program, and the Interstellar Propulsion Research Project. Les thrice received NASA's Exceptional Achievement Medal, has 3 patents, and was selected for membership in Mensa.

Vocabulary to know:

bio- (prefix)
holo- (prefix)
aero- (prefix)
"dark" (as a technical/military term)
redundancy (technical term)

Content warnings:

"SOB"
shit

Reading notes: This story is rather long. It does not have built-in breaks, so breaks can be created in the following locations:

- pg. 33, after the end of the first paragraph: "And he was funding my starship."
- pg. 38, after the end of the second paragraph: "But we did the best we could do."

Companion stories in this collection:

Stowaway / Volunteers; Looneytunes / Genetic Bottleneck: The Founder Effect

Pre-reading Questions to Explore:

Discuss what a Lagrange Point is. What makes it useful for space habitations?

Psychologists often talk about the phenomenon of “flashbulb memories.” How reliable are they, really? Discuss.

Summary:

Nitin Baskhi, the scientist in charge of the first big interstellar colony project, recounts his side of the tragic story leading up to the death of his biggest financier, Keegan Coran.

Comprehension Questions and Activities:

1. How has Earth changed in this future?
2. What kinds of biases are presented by our narrator?
3. Discuss: In light of the questionable reliability of “flashbulb memories,” how reliable do you think our narrator is at this point?
4. Do a RAFT assignment on this piece.

Answers

1. Extensive technological changes (e.g. aerobus) and Lunar settlement, among other things (this question has lots of answers).
2. His own—the *Victoria* project was his “baby,” as it were, and he finds it incredibly important. He is also, in-universe, against the “Feffer” movement.

TARNISHED HEROES

Two excerpts from *Mars, a History*, an in-universe history book written on Mars and one excerpt from *Encyclopedia Astra*, an in-universe encyclopedia based on Cistercia.

Questions and Activities:

1. How do these “recorded histories” differ from the firsthand account?
2. Discuss the difference between the *Mars, a History* excerpts and the *Encyclopedia Astra* excerpt. How do they paint our narrator?
3. Discuss: Were Dr. Bakshi’s actions moral or immoral? What about Keegan Coran’s?

SOMNUM EXTERRERI

Christopher L. Smith

Author's Biography:

A native Texan by birth (if not geography), **Christopher L. Smith** moved “home” as soon as he could.

Attending Texas A&M, he learned quickly that there was more to college than beer and football games. He relocated to San Antonio, attending SAC and UTSA, graduating in late 2000 with a BA in Literature. While there, he also met a wonderful lady who somehow found him to be funny, charming, and worth marrying. (She has since changed her mind on the funny and charming.)

Christopher began writing fiction in 2012. His short stories can be found in multiple anthologies, including John Ringo and Gary Poole's *Black Tide Rising*, Michael Z. Williamson's *Forged in Blood*, Larry Correia and Kacey Ezell's *Noir Fatale*, and Tom Kratman's *Terra Nova*. He has co-written two novels, *Kraken Mare* with Jason Cordova, and *Gunpowder & Embers* with Kacey Ezell and John Ringo.

His cats allow his family and their dogs to reside with them outside of San Antonio.

Vocabulary to know:

stasis
cryo- (prefix)
tipple
haggard
nimbus
theta rhythms
sit rep (short for situation report)

Content warnings:

shit
hell
crap

Reading notes: This story is rather long, but does have breaks—they're visible as extra spaces between paragraphs.

The title is Latin: it means “sleep away from the earth.”

Companion stories in this collection:

No Word for Princes / Artificial Intelligence

Pre-reading Questions to Explore:

What kinds of things happen to people if they don't get enough sleep?

Summary:

Acting Captain Madison Corbeau of the colony ship *Victoria* is having trouble sleeping, but she's in charge of shepherding the ship, its colonists, and her crew safely to Cistercia. Her crew, however, is also having trouble sleeping, and all of them are starting to hallucinate.

Comprehension Questions and Activities:

1. Think about the requirements of a leadership role. What sorts of qualities make a competent leader? Does Madi show them?
2. Activity: make a setting map of *Victoria*.

GHOSTS

An excerpt from *Encyclopedia Astra*, an in-universe encyclopedia based on Cistercia.

Questions and Activities:

1. When computers underpin everything, what happens when they're flawed?
2. Activity: This entry references the *Flint's People's History* version of historical analysis, but does not provide it. Write that excerpt.

KAMEKURA

David Weber

Author's Biography:

David Weber was born in Cleveland a long, long time ago, and grew up in rural South Carolina. He was a bookworm from childhood, blessed with a father who collected autographed copies of every E.E. Smith hardcover and introduced him to Jack Williamson at the tender age of ten, and a mother who ran her own ad agency and encouraged him to write. From that start, with a love of history from a very early age and as a practitioner of RPGs before the world had ever heard of something called Dungeons & Dragons, it was inevitable he would fall into evil company and become a writer of science fiction himself. He sold his first novel to Jim Baen, his enabler at Baen Books, in 1989. Since that time, he has perpetrated 67 solo and collaborative novels (with 2 more delivered) and an unconscionable number of anthologies upon an innocent and unsuspecting public. He is perhaps best known for his character Honor Harrington, whom he hopes never to meet in a dark alley, given all the bones she has to pick with him. Fans should be warned never to press his "talk button," because if they do, they will never get him to shut up again.

Vocabulary to know:

belt-and-suspenders

LZ [landing zone]

HOTAS [Hands-On Throttle And Stick]

KEW [Kinetic Energy Weapon]

Content warnings:

hell

bitch

goddamn

Reading notes: This story is rather long, but has paragraph breaks (extra space breaks) as well as diary entry breaks. One entry is over five pages, but the rest are reasonably short.

Companion stories in this collection:

Descent / Cursed Colony; The Loss of Beaver Flight / Beaverton; Fire From Heaven/ Coyote

Pre-reading Questions to Explore:

What makes a story a tragedy?

Does malice have to be present for tragedy to occur?

Summary:

Pilot Joan Walker, operating the first lander bound for Cistercia, is forced wildly off-course and marooned in space.

Comprehension Questions and Activities:

1. Activity: make a setting map for the lander *Whale*.
2. Read "Descent," the first story in this anthology; compare Joan's isolation to Dave's. What do they do similarly? Differently?

3. Activity: write a RAFT assignment for this short story.

DUTCHMAN

An excerpt from *Encyclopedia Astra*, an in-universe encyclopedia based on Cistercia.

Questions and Activities:

1. Discuss the “lost souls” superstitions. Which ones are based on truth, which ones are questionably corrupted myths, and which ones are out-and-out made up?
2. Why is there such a desire to bring “lost souls” back?

SONNY STIRS

Daniel M. Hoyt

Author's Biography:

Daniel M. Hoyt is a systems architect for trajectory physics software, when not writing or wrangling royalty calculations. Dan has appeared in premier magazines like *Analog* and several anthologies, notably the recent *Stellaris: People of the Stars* (Baen), and Dr. Mike Brotherton's *Diamonds in the Sky* (funded by the National Science Foundation), and has edited *Fate Fantastic* and *Better Off Undead* for DAW. Having published in several genres, Dan returned to his science fiction roots with his debut space opera, *Ninth Euclid's Prince*, and has since become known for plausible science fiction tales with emotionally resonant characters. Catch up with him at danielmhoyt.com.

Vocabulary to know:
saboteur

Content warnings:

Reading notes: This story is rather long, but split up by the frequent perspective shifts.

Pre-reading Questions to Explore:

Discuss something from history, like the Johnny Appleseed story or George Washington and the cherry tree. Has it become exaggerated over time? How?

Summary:

Set in a bar on Cistercia, three different parties talk over each other to tell their version of the legend of Sonny Strongbow.

Comprehension Questions and Activities:

1. According to the story, how did Mason Munson get the name Sonny Strongbow?
2. What about Jackson de Clare?
3. Speculate: did the real Sonny exist? If you think yes, which version of events do you think is closest to the truth? Back it up with evidence from the text. If you think no, speculate further to develop a true history.

Answers

1. "Sonny" in honor of his friend Hal, who called him that (he asked the ship's AI to address him as such); "Strongbow" because he'd been a competitive archer.
2. Ostensibly, "it was easy to see how Jackson could become Sonny, and the Second Earl of Pembroke, Richard de Clare, was also known as Strongbow."

SONNY STRONGBOW

An excerpt from *Flint's People's History of Interstellar Exploitation*, an in-universe history book based on Trudovik.

Questions and Activities:

1. How does the tone of the excerpt differ from the tone of the short story?
2. Identify biases in the text. What specific keywords clue you in immediately?

STOWAWAY

Brad R. Torgersen

Author's Biography:

Brad R. Torgersen is a multi-award-winning science fiction and fantasy writer whose book *A Star-Wheeled Sky* won the 2019 Dragon Award for Best Science Fiction Novel at the 33rd annual DragonCon fan convention in Atlanta, Georgia. A prolific short fiction author, Torgersen has published stories in numerous anthologies and magazines, to include several Best of Year editions. Brad is named in *Analog* magazine's Who's Who of top *Analog* authors, alongside venerable writers like Larry Niven, Lois McMaster Bujold, Orson Scott Card, and Robert A. Heinlein. Married for over 25 years, Brad is also a United States Army Reserve Chief Warrant Officer—with multiple deployments to his credit—and currently lives with his wife and daughter in the Mountain West, where they keep a small menagerie of dogs and cats.

Vocabulary to know:
barrio
contingency

Content warnings:
damned
hell

Reading notes: This story is rather long, but split up with paragraph breaks and scene breaks.

Companion stories in this collection:

Confession / Tarnished Heroes; Looneytunes / Genetic Bottleneck: The Founder Effect

Pre-reading Questions to Explore:

Are there any frontiers left that we haven't explored? Are they worth exploring? Even more so, are they worth *settling*?

Suggested additional reading: anything discussing a "just law," such as Paragraphs 12 and 13 from Martin Luther King Jr.'s *Letter From a Birmingham Jail*.

Summary:

Gabriel Martinez tells his great-grandson the story of how he stowed himself away on the colony ship *Victoria* to come to Cistercia.

Comprehension Questions and Activities:

1. Was Gabe justified in his decision? why or why not?
2. Discuss: what makes a just law? Were the rules/laws put into places by the overseers of *Victoria* just ones? Explain your reasoning.

VOLUNTEERS

An excerpt from *Encyclopedia Astra*, an in-universe encyclopedia based on Cistercia.

Questions and Activities:

1. When you think about a “functioning society,” what jobs first come to mind? Which ones do you think you might overlook?
2. Research and discuss the current process for astronaut selection. What changes would you make to that process if you were trying expand it to encompass the requirements for a whole colony’s worth of people?
3. Activity: design your own selection process for a colony ship like *Victoria*. Describe your criteria for selection and the skills you plan to recruit.

Part Two: the Colonists

CERBERUS PROJECT

Monalisa Foster

Author's Biography:

Monalisa Foster won life's lottery when she escaped communism and became an unhyphenated American citizen. Her works tend to explore themes of freedom, liberty, and personal responsibility. Despite her degree in physics, she's worked in several fields including engineering and medicine. She and her husband (who is a writer-once-removed via their marriage) are living their happily-ever-after in Texas with their children, both human and canine. Her epic space opera, *Ravages of Honor*, is out now.

Vocabulary to know:
prefab / prefabricated

Content warnings:

Reading notes: This story is rather long, but split up with paragraph breaks.

The short story is dedicated to Norman Borlaug, a crop scientist whose wheat research substantially increased food stability in India and Pakistan.

Companion stories in this collection:

The Legend of Jimmy Vee / Apex Predators; Jack Daw Days / Ranchers

Pre-reading Questions to Explore:

Look up Boston Robotics and their dog-robots. What uses could they have here on Earth?

Summary:

Normina Borlaug is a shepherd on Cistercia, taking care of the colonists' flock of sheep. The time has come to move the sheep for lambing and grazing, so Mina is the sole human shepherd on this mission – her help is in the form of three robotic sheepdogs, which herd the sheep for her. But when an earthquake separates Mina from her flock, one robo-dog breaks protocol and rescues her.

Comprehension Questions and Activities:

1. What was the concerning hack that made the lead scientist so upset?
2. Discuss: why is it so important to not get attached to the robots?
3. Why do you think someone changed the behavior of the robot dogs?
4. This short story is dedicated to Norman Borlaug, a real-life scientist. After learning about him in some way (research, etc), look at this short story again. Why did the author choose to dedicate this story to him?

Answer

1. A colonist hacked the dogs so they would walk in a circle 3 times before sitting down – just like a real-life dog would.

SHEEPDOGS

An excerpt from *Encyclopedia Astra*, an in-universe encyclopedia based on Cistercia.

Questions and Activities:

1. Discussion: unpack the last line of this entry, "Humans will adopt anything as a pet."
What sorts of real-life examples already exist of humans adopting robots as pets?

ALAS ROANOKE

Sara A. Hoyt

Author's Biography:

Sarah A. Hoyt has published over thirty novels with various publishers (and one indie) as well as a hundred short stories with magazines such as *Asimov's* and *Analog* (and a lot of anthologies). She prefers science fiction but has been instructed to give fair warning that no genre is safe from her. Well, except perhaps picture books and men's adventure. She also writes as Sarah D'Almeida and Elise Hyatt.

Sarah lives in Colorado with her husband and a varying number of cats. When not writing she can be found walking, reading, refinishing furniture or creating miles of fillet crochet.

Vocabulary to know:
quicken(ed) (verb)
"lectrowagon" (an electronic wagon)

Content warnings:
passing comment about
suicide cults

Reading notes: This story is rather long and lacks good breaks. Breaks can be created in the following places:

- pg. 182, bottom of the page (after the end of the eighth paragraph): "...and loved anything with sugar."

- pg. 188, after the end of the first paragraph: "I hadn't gone because I'd had the flu."

- pg. 192, after the short single-line paragraph towards the bottom of the page: "That was it."

- pg. 197, after the end of the fourth paragraph: "...though I can't imagine for what purpose."

Companion stories in this collection:

On the Trail of the Sügenhound / Cryptids; Redemption / Prion Disease

Pre-reading Questions to Explore:

Discuss the Lost Colony of Roanoke and all the theories around its disappearance.

Summary:

Georgine Ellis, the police chief of a new colony on Cistercia named Roanoke, investigates the mysterious disappearance of teenager Courtney Beulen. Courtney's best friend José (Joe) Beck came in with the story, and another officer – Michael (Mike) Judd – takes his deposition. The disappearance becomes a true Missing Persons case, with Mike and Georgi spending months searching.

Comprehension Questions and Activities:

1. Joe expresses interest in outlandish stories written by someone in the colony. Discuss similar analogues in modern examples – what sorts of stories stick around for the sheer drama of them?
2. What do you think happened to Courtney Beulen? To New Virginia?
3. The official histories have very little in the way of answers as to the disappearance of New Virginia. What sorts of discoveries would help fill in the gaps?

LOST COLONY

An excerpt from *Flint's People's History of Interstellar Exploitation*, an in-universe history book based on Trudovik.

Questions and Activities:

The *Flint's People's History* seems to have its own narrative idea of what happened to New Virginia. Is there anything in "Alas Roanoke" that suggests the truth of its claims? Make a case either way with context clues.

THE LEGEND OF JIMMY VEE

Chris Kennedy

Author's Biography:

A Webster Award winner and three-time Dragon Award finalist, **Chris Kennedy** is a Science Fiction/Fantasy/Young Adult author, speaker, and small-press publisher who has written over 25 books and published more than 100 others. Chris's stories include the "Occupied Seattle" military fiction duology, "The Theogony" and "Codex Regius" science fiction trilogies, stories in the "Four Horsemen" and "In Revolution Born" universes, and the "War for Dominance" fantasy trilogy. Get his free book, *Shattered Crucible*, at his website, chriskennedypublishing.com.

Called "fantastic" and "a great speaker," he has coached hundreds of beginning authors and budding novelists on how to self-publish their stories at a variety of conferences, conventions and writing guild presentations. He is the author of the award-winning number one best-seller, *Self-Publishing for Profit: How to Get Your Book Out of Your Head and Into the Stores*, as well as the leadership training book, *Leadership from the Darkside*.

Chris lives in Virginia Beach, Virginia, with his wife, and is the holder of a doctorate in educational leadership and master's degrees in both business and public administration. Follow Chris on Facebook at facebook.com/ckpublishing.

Vocabulary to know:
vapor-lock
apiculturalist

Content warnings:
damn

Reading notes: This story is somewhat long but has some paragraph breaks. A few chunks in-between, however, are on the longer side.

Companion stories in this collection:

Cerberus Project / Sheepdogs; Jack Daw Days / Ranchers

Pre-reading Questions to Explore:

Humans are at the top of the food chain for a lot of reasons. What are they? What happens when some of those advantages are taken away?

Summary:

Jimmy Vee, beekeeper, has lascivious intentions towards Jessie Franz, and convinces her to a picnic with him. While she's worried about a monster in the woods, he reassures her all is fine. It isn't: an alien monster attacks them, and it takes Jimmy's quick thinking and dumb luck to get them both out alive.

Comprehension Questions and Activities:

1. Jimmy brought along a beverage. What is it?

2. The creature is being incredibly aggressive, a fact which is later explained. What's the reason for its aggression?
3. Activity: draw a setting map of the areas described: the lea, the river, the cave.
4. What do you think Jimmy decided to do with the creature's offspring?

Answers

1. Mead! It's made from honey.
2. It has offspring nearby; Jimmy and Jessie are in its territory.

APEX PREDATORS

An excerpt from *Encyclopedia Astra*, an in-universe encyclopedia based on Cistercia.

Questions and Activities:

With the information in this encyclopedia entry, what sorts of things can you extrapolate about the world of "The Legend of Jimmy Vee"?

ON THE TRAIL OF THE SÜGENHOUND

Vivienne Raper

Author's Biography:

Vivienne Raper is a freelance journalist with a Ph.D. in satellite engineering who somehow ended up writing about biomedical science for a living. Her fiction is unsurprisingly hard SF, but with a smattering of mil-SF and crime thriller. Married with a medium-sized husband, small son and huge poodle, her hobbies include renovating a crumbling Victorian house and playing board games.

Vocabulary to know:

piebald
prion disease

Content warnings:

goddamned
hell
shit

Reading notes: This story is somewhat long but has some paragraph breaks. One of the internal stories is also long and can be broken up at the following place:

- pg. 226, bottom of the page, after the fourth paragraph: ". . ." to remind me how alien it is."

Companion stories in this collection:

Alas Roanoke / Lost Colony; Redemption / Prion Disease

Pre-reading Questions to Explore:

Discuss cryptids and other mythical creatures. How did they get such reputations? How are cryptid stories related to fish tales?

Summary:

Hilary Scoot, an investigative writer, seeks firsthand narratives about a local monster (called a Sügenhound) which may or may not be real. The writer interviews Chase Harriman, whose father allegedly died from his contact with one, and tells the famous story of the first person to encounter a Sügenhound: Howard Brocious.

Comprehension Questions and Activities:

1. This story is supposed to be the tales of eyewitness narrators, but they've been recounted by an investigative reporter. How will that lens affect the story?
2. Speculate: will the reporter survive to write another book?

CRYPTIDS

An excerpt from *Encyclopedia Astra*, an in-universe encyclopedia based on Cistercia.

Questions and Activities:

Read the encyclopedia entry through the lens of the story. What's missing? What's different?

NO WORD FOR PRINCES

Jody Lynn Nye

Author's Biography:

Jody Lynn Nye lists her main career activity as “spoiling cats.” She lives near Atlanta with three feline overlords, Athena, Minx, and Marmalade; and her husband, author and packager Bill Fawcett. She has published more than 50 books, including collaborations with Anne McCaffrey and Robert Asprin, and over 165 short stories. Her latest books are *Rhythm of the Imperium* (Baen), *Moon Tracks* (with Travis S. Taylor, Baen), *Myth-Fits* (Ace), and *Once More, with Feeling*, a short book on revising manuscripts (WordFire). She teaches the annual DragonCon Two-Day Writers Workshop every Labor Day weekend in Atlanta, Georgia, and is a judge for the Writers of the Future Contest.

Vocabulary to know:
gadfly (derogatory)
pundit
Creutzfeldt-Jakob Disease

Content warnings:

Reading notes: This story is long but is regularly broken up with paragraph breaks.

Companion stories in this collection:

Somnum Exterreri / Ghosts

Pre-reading Questions to Explore:

Become somewhat familiar with Creutzfeldt-Jakob Disease and Mad Cow disease; discuss them in the context of modern pandemics. While they're incredibly debilitating, they don't transmit as easily as other diseases like variations on the flu: why?

Summary:

Dr. Masika Seddik is but a humble psychologist when Dr. Trudy Pangin, mayor of Antonia, moves her to biologic investigators and eventually promotes her to the head of the Science Foundation. All the while, Masika is helped out by her AI implant, Alhikma, who steps in to aid her when Trudy dies and Masika is appointed mayor in her place.

Comprehension Questions and Activities:

1. How does Alhikma interact with Masika?
2. In light of this short story being written during the COVID-19 pandemic of 2020, what details stand out?
3. Debate: does Masika ever actually become the leader the colony thinks she is, or is Alhikma still propping her up?
4. Discuss the handling of this mysterious disease. What seems to have been effective? What was less so?

Answer

1. He takes control of her body and answers with her own voice.

ARTIFICIAL INTELLIGENCE

An excerpt from *Flint's People's History of Interstellar Exploitation*, an in-universe history book based on Trudovik.

Questions and Activities:

1. Think about the story in light of the information in the excerpt. Is Masika's faith in Alhikma appropriate or misplaced?
2. Look back at two other excerpts after stories: "Cursed Colony" and "Dutchman." What sort of a picture do these three excerpts paint when read together?

Part Three: Paradise Lost

THE LOSS OF BEAVER FLIGHT

Brent M. Roeder

Author's Biography:

Brent M. Roeder is a neuroscience PhD candidate researching how to restore damaged memory function. A life-long geek, he enjoys worldbuilding and writing sci-fi and fantasy to relax from work. Very occasionally he even remembers to finish a story.

Vocabulary to know:
oxidizer

Content warnings:

Reading notes: This story is long but is regularly broken up with paragraph breaks. This short story is very technical and may be difficult to understand without some kind of foundation in the basics of rocket fuel chemistry.

Companion stories in this collection:

Descent / Cursed Colony; Kamekura / Dutchman; Fire From Heaven / Coyote

Pre-reading Questions to Explore:

Familiarize the class with the fundamentals of rocket fuel and with at least one of NASA's space shuttle disasters. What went wrong?

Summary:

The third settlement on Cistercia was hard-won: seven orbital tug pilots lost their lives in the process. As part of an annual civil ceremony, the event is re-lived through the eyes of Chris French, the leader of those tugs.

Comprehension Questions and Activities:

1. The members of Beaver Flight lost their lives in this mission. Do you think they were prepared for that risk in advance? If so, how do you think they prepared? If not, what made them decide to continue the mission in the face of death?
2. Discuss the civil ceremony associated with Landing Day. Do parts of it have analogues in current civil ceremonies here on Earth?

BEAVERTON

An excerpt from *Encyclopedia Astra*, an in-universe encyclopedia based on Cistercia.

Questions and Activities:

1. In light of the short story, what seems different about this encyclopedia entry? Is recorded history adding, missing, emphasizing, or de-emphasizing anything?

JACK DAW DAYS
Catherine L. Smith

Author's Biography:

Catherine L. Smith earned a BS in Entomology, and a BS in Agronomy from the University of Wisconsin and subsequently an MS in Entomology from the University of Tennessee. She currently works as a Molecular Biologist tracking veterinary disease strains for autogenous vaccine production where she uses next-gen sequencing and metagenomic techniques to aid in diagnostics and novel pathogen discovery. Cathe has been a consultant on alien design for numerous science fiction authors, and finally begun writing her own stories.

Vocabulary to know:
prion disease

Content warnings:

Reading notes: This story is long but is regularly broken up with paragraph breaks, though the chunks are rather large.

Companion stories in this collection:

Cerberus Project / Sheepdogs; The Legend of Jimmy Vee / Apex Predator

Pre-reading Questions to Explore:

Discuss the roles of grazing and ruminant animals in agricultural societies, especially in those without enough water to sustain lush plant life.

Summary:

In the wake of widespread Terran cattle death, Jacqueline Rabinowicz is trying her hand at domesticating a local species: frill-horns. By accident, a visiting graduate student (Cesar Ortiz y Hassan) is abducted by a young bull and found the next day, dehydrated and sore but otherwise well.

Comprehension Questions and Activities:

1. Who is the titular Jack Daw?
2. What is the "official" diagnosis on why the cattle all died?
3. Activity: RAFT assignment
4. Activity: place the scenes from this short story on a timeline.

Answers

1. Jackie Rabinowicz; officially a typo, but also called "Jackdaw" by her grandfather when she was young.
2. "failure to thrive"

RANCHERS

An excerpt from *Flint's People's History of Interstellar Exploitation*, an in-universe history book based on Trudovik.

Questions and Activities:

1. Analyze the subtext of the last paragraph. What does this suggest about Kerenskiy?

2. Compare Aopo Island and Kerenskiy to modern-day civilizations based on their respective diets.

REDEMPTION

Philip Wohlrab

Author's Biography:

Philip Wohlrab has spent time in the United States Coast Guard and has served for more than 13 years in the Virginia Army National Guard. Serving as a medic attached to an infantry company, he earned the title "Doc" the hard way while serving across two tours in Iraq. He came home and continued his education, earning a Master of Public Health degree in 2016. He currently works with Booz Allen Hamilton as an Adaptive Wargamer for the United States Air Force.

Vocabulary to know:
organophosphate poisoning
vector (in epidemiology)
sequelae

Content warnings:
damn

Reading notes: This story is long but is regularly broken up with paragraph breaks and time markers. This story will benefit from some knowledge of Creutzfeldt-Jakob Disease.

Companion stories in this collection:

Alas Roanoke / Lost Colony; On the Trail of the Sügenhound / Cryptids

Pre-reading Questions to Explore:

What are factors which cause a disease to spread rapidly?

Summary:

In the island town of Felicity, a plague is devastating the inhabitants. It's up to Motoko Serizawa, who was just stopping in for a relaxing visit with her friend Eileen, to sort it out; every other competent medical professional is dying or dead. Her last hope is the local drunk, George Holt.

Comprehension Questions and Activities:

1. What sorts of liberties did the author take in this story for the sake of narrative expedience?
2. Activity: make a timeline to describe the progression of the disease on the town.

PRION DISEASE

An excerpt from *Encyclopedia Astra*, an in-universe encyclopedia based on Cistercia.

Questions and Activities:

1. Compare the events of this story to "On the Trail of the Sügenhound."

LOONEYTUNES

D.J. Butler

Author's Biography:

D.J. (Dave) Butler has been a lawyer, a consultant, an editor, and a corporate trainer. His novels published by Baen Books include the epic fantasy trilogy *Witchy Eye*, *Witchy Winter*, and *Witchy Kingdom*, as well as the 1930s occult detective novel, *The Cunning Man* (co-written with Aaron Michael Ritchey), and the sword-and-planet noir *In the Palace of Shadow and Joy* (July 2020). He also writes for children: the steampunk fantasy adventure tales *The Kidnap Plot*, *The Giant's Seat*, and *The Library Machine* are published by Knopf. Other novels include *City of the Saints* from WordFire Press.

Dave also organizes writing retreats and anarcho-libertarian writers' events and travels the country to sell books. He plays guitar and banjo whenever he can and likes to hang out in Utah with his children. Dave in fact has a bridal kidnapping in his family tree, as recently as the 20th century.

Vocabulary to know:

pulque
anemia

Content warnings:

Reading notes: This story is very short!

Companion stories in this collection:

Confession / Tarnished Heroes; Stowaway / Volunteers

Pre-reading Questions to Explore:

Research and discuss the Hapsburg family and their tendency to in-breed their children so egregiously – what side-effects show up in their family tree? What physical traits?

Summary:

Olaf and Ilya are digging up sand pipers on the beach while discussing the genetic isolation problems present in the Cistercia colonies.

Comprehension Questions and Activities:

1. What do you think is wrong with Olaf and Ilya? What context clues tipped you off?
2. Speculate: is the story Olaf is telling true, false, or somewhere in-between? Explain.

GENETIC BOTTLENECK: THE FOUNDER EFFECT

An excerpt from *Flint's People's History of Interstellar Exploitation*, an in-universe history book based on Trudovik.

Questions and Activities:

1. Compare bride-kidnapping to the old practice of dowries.
2. Using information from the story, decide: is bride-kidnapping a fair practice? Why or why not?

FIRE FROM HEAVEN

David Weber and Mark H. Wandrey

Author Biographies:

David Weber was born in Cleveland a long, long time ago, and grew up in rural South Carolina. He was a bookworm from childhood, blessed with a father who collected autographed copies of every E.E. Smith hardcover and introduced him to Jack Williamson at the tender age of ten, and a mother who ran her own ad agency and encouraged him to write. From that start, with a love of history from a very early age and as a practitioner of RPGs before the world had ever heard of something called Dungeons & Dragons, it was inevitable he would fall into evil company and become a writer of science fiction himself. He sold his first novel to Jim Baen, his enabler at Baen Books, in 1989. Since that time, he has perpetrated 67 solo and collaborative novels (with 2 more delivered) and an unconscionable number of anthologies upon an innocent and unsuspecting public. He is perhaps best known for his character Honor Harrington, whom he hopes never to meet in a dark alley, given all the bones she has to pick with him. Fans should be warned never to press his “talk button,” because if they do, they will never get him to shut up again.

International bestselling author of military sci-fi, space opera, and zombie apocalypse **Mark H. Wandrey** is also the only four-time DragonCon Dragon Award finalist!

His most successful works to date can be found in the Four Horsemen Universe (4HU), which he created and now shares with a slew of incredible authors, including his writing partner and publisher, Chris Kennedy. The first book in the series, *Cartwright's Cavaliers*, was his second Dragon Award Finalist in 2017. With more than 40 titles available, and more every month, if you love military science fiction, this is the series for you!

Living the full-time RV lifestyle as a modern-day nomad with his wife, Joy, and two Chihuahuas, Mark Wandrey has been writing science fiction since he was in grade school. He launched his professional career in 2004. Now, 15 years later, he has written more than 25 books and dozens of short stories.

Follow him on Facebook: [facebook.com/mark.wandreyauthor.7/](https://www.facebook.com/mark.wandreyauthor.7/); his website: worldmaker.us; or Patreon: [patreon.com/MarkHWandrey](https://www.patreon.com/MarkHWandrey).

Vocabulary to know:
EVA (ExtraVehicular Activity)

Content warnings:
damn/ed and variations
hell/hellacious
badass

Reading notes: This story is very long, albeit chunked into sections; the longest such section is about 7 pgs. This story holds no emotional weight without “Descent” and “Kamekura”; it is suggested that it not be read before those.

Companion stories in this collection:

Descent / Cursed Colony; Kamekura / Dutchman; The Loss of Beaver Flight / Beaverton

Pre-reading Questions to Explore:

Briefly revisit “Descent” and “Kamekura.” Where did we last leave our characters?

Summary:

Stranded in orbit around Cistercia, the remaining occupants of the colony ship *Victoria* are both trapped on it and still limping it along to its inevitable death. Captain Edwin Dupree is in charge of *Victoria* as she slowly creeps along into non-functionality when suddenly an emergency beacon appears. A message from a woman long-dead (Joan Walker) reaches them in time to alert them to the return of the prodigal ship *Prometheus*, long believed to be lost in space forever. On that formerly-doomed ship is David Parker, whose long stint in isolation wreaked havoc on his psyche.

Comprehension Questions and Activities:

1. Did David actually know Joan was married? (Look for proof in “Descent” if need be.)
2. Speculate: what’s going to happen to *Victoria* now?

COYOTE

An excerpt from *Encyclopedia Astra*, an in-universe encyclopedia based on Cistercia.

Questions and Activities:

1. Read a Native American legend about Coyote – the Northwestern tribes held him to be the one who brought fire from heaven – and compare it to the Greek myth of Prometheus. (Revisit Prometheus if need be.)
2. The colonies already have literal fire, so what is it that *Prometheus* is bringing to Cistercia out of the heavens that carries the same value? Is there anything on board *Prometheus* that could be valued as highly as fire, or is that goal unattainable?

Epilogue

Serves to be an appendix/addendum/conclusion to “The Loss of Beaver Flight” and continues/concludes the main story arc.